

PRODUCT DATA SHEET

SikaBiresin® TC-455

Two component compressible gap filler for heat transfer

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Properties	SikaBiresin® TC-455 (A)	SikaBiresin® TC-455 (B)
Chemical base	2-component silane terminated polymer (STP)	
Color (CQP001-1)	Blue paste	White paste
Density (uncured)	-	-
	2.0 g/cm ³	2.0 g/cm ³
	mixed	2.0 g/cm ³
Mixing ratio	by volume A:B	1 : 1
Viscosity (CQP029-4)	-	-
	70 Pa.s ^B	60 Pa.s ^B
	mixed	60 Pa.s
Application temperature	20 - 40 °C	
Open time (CQP046-11 / ISO 4587)	60 min	
Shore A hardness (CQP023-1 / ISO 48-4)	35	
Thermal conductivity (ASTM D5470)	2.2 W/mK ^C	
Flammability (UL 94-2013 Rev.7-2017 s.8)	V0	
Tensile strength (CQP036-2 / ISO527-2)	0.5 MPa ^D	
Elongation at break (CQP036-2 / ISO 527-2)	20%	
Service temperature (CQP509-1 / CQP513-1)	-40 to + 90 °C	
Shelf life	6 months ^E	

CQP = Corporate Quality Procedure

^{B)} With PP 25mm at 10s⁻¹, thickness: 0.5 mm^{C)} Measured as paste at 25 °C + 2 °C, thickness: 2 mm^{D)} Cures at room temperature for 7 days 23 °C/50% r.h^{E)} Storage at temperatures between 5 °C and 25 °C

DESCRIPTION

SikaBiresin® TC-455 is a two-component low viscous gap filler with high thermal conductivity based on silane-terminated polymers (STP), silicone free and curable at room temperature.

PRODUCT BENEFITS

- High thermal conductivity
- Easy compressible to thin layers
- Flame retardant and self extinguishing
- Easy to remove for repair work
- Silicone free

AREAS OF APPLICATION

SikaBiresin® TC-455 is suitable for gap filler applications between two surfaces to ensure a proper thermal management of the systems. This product is suitable for professional experienced users only. Tests with actual substrates and conditions have to be performed ensuring adhesion and material compatibility.

CURE MECHANISM

SikaBiresin® TC-455 (A) cures by reaction with atmospheric moisture. For achieving the properties, it must be mixed 1:1 with SikaBiresin® TC-455 (B).

METHOD OF APPLICATION

Surface preparation

Substrates must be clean, dry and free of all contamination (grease, oil, dust and powdery deposits) before applying product. Surface treatment depends on the specific nature of the substrates.

Application

Cartridge use: SikaBiresin® TC-455 can be dispensed from dual cartridges with adequate pneumatic dispensers. Extrude adhesive without mixer to equalized the filling levels. Attach the mixer and dispose of the first few centimeters of the bead before the application. A static mixer of type Nordson TAH 7701816 must be used to ensure good mixing quality. Other static mixers may be suitable but have to be thoroughly tested beforehand. Bulk use: SikaBiresin® TC-455 is dispensed from pails or drums with adequate 2-component equipment. For advice on selecting and setting up a suitable pump system, contact the System Engineering Department of Sika Industry.

Removal

Uncured SikaBiresin® TC-455 may be removed from tools and equipment with Sika® Remover-208 or a suitable solvent. Once the adhesive is cured it can only be removed mechanically. Hands and exposed skin should be washed immediately using Sika® Cleaner-350H or a suitable industrial hand cleaner and water. Do not use solvents on skin.

STORAGE CONDITIONS

The cartridge kit must be stored horizontally. This product is non-toxic and non-flammable. It can be transported as a paste-like chemical at room temperature.

FURTHER INFORMATION

Copies of the following publications are available on request:

- Safety Data Sheet
- Product Data Sheet
- Application Guideline

PACKAGING INFORMATION

SikaBiresin® TC-455 A+B

Dual cartridge	400 ml
Mixer: Nordson TAH 7701816	

SikaBiresin® TC-455 A

Pail	23 l
Drum	180 l

SikaBiresin® TC-455 B

Pail	23 l
Drum	180 l

BASIS OF PRODUCT DATA

All technical data stated in this document are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

HEALTH AND SAFETY INFORMATION

For information and advice regarding transportation, handling, storage and disposal of chemical products, users shall refer to the actual Safety Data Sheets containing physical, ecological, toxicological and other safety-related data.

DISCLAIMER

The information, and, in particular, the recommendations relating to the application and enduse of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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